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1-24. (CANCELED)

25. (CURRENTLY AMENDED) A power supply system for use in a motor vehicle for providing electrical energy to first and second electric consumers, the power supply system comprising:

a primary energy storage memory for providing electrical energy at a first voltage level to the first energy consumer;

a secondary energy storage memory for providing electrical energy at a second voltage level to the second energy consumer; and

a voltage converter connected from the primary energy storage memory to the secondary energy storage memory for receiving electrical energy from the primary energy storage memory and providing electrical energy to the secondary energy storage memory,

wherein the second voltage level is higher than the first voltage level; and the electrical energy provided to the secondary energy storage memory is stored in the secondary energy storage memory to be provided to the second energy consumer for a period of time when required, whereby

the second voltage level will not fall below the first voltage level during the period of time, thereby preventing a feedback from the secondary energy storage memory to the first energy storage memory.

26. (NEW) The power supply system according to claim 25, wherein the voltage converter (3) is a high-setting adjuster.

27. (NEW) The power supply system according to claim 25, wherein the voltage converter (12) is based on transformatory potential separation.

28. (NEW) The power supply system according to claim 25, wherein the secondary energy storage is a storage capacitor (4) of great voltage swing.

29. (NEW) The power supply system according to claim 28, wherein said secondary energy storage is designed as one of a double-layer or multi-layer capacitor (4) of high capacity.

30. (NEW) The power supply system according to claim 25, wherein a current-limiting unit (13) is provided by which the first consumer is detected as a parameter of a total current load capacity of said primary energy storage (1) and the current load of said primary energy storage (1) and depending thereon, a defined current flow from charging said secondary energy storage (4) is determined and released.

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31. (NEW) The power supply system according to claim 25, wherein the switching has a monitoring device (14) for detecting the voltage of said primary energy storage (1) which interacts with a current-limiting unit (16) for limiting the current made available by said secondary energy storage (4) to said second consumer.

32. (NEW) The power supply system according to claim 25, wherein the first consumer is a reduced-power consumer (2) and the second consumer is a high-powered consumer (5) relative to the power consumption of the first consumer.

33. (NEW) The power supply system according to claim 25, wherein for power control of second consumer, an electronic control unit (17) is provided which produces a constant output voltage of low level from a variable input voltage.

34. (NEW) The power supply system according to claim 26, wherein the voltage converter (3) a cable inductivity (7) as a throttle.

35. (NEW) The power supply system according to claim 26, wherein the voltage converter (3, 12) is not deactivated even after a maximum loading voltage has been reached.

36. (NEW) The power supply system according to claim 25, wherein is used in at least one of a 12-V and a 42-V power supply of the motor vehicle.

37. (NEW) A power supply system for use in a motor vehicle for providing electrical energy to first and second electric consumers, the power supply system comprising:

a primary energy storage for providing electrical energy at a first voltage level to the first energy consumer;

a secondary energy storage receiving electrical energy solely from the primary energy storage for providing electrical energy at a second voltage level to the second energy consumer; and

a voltage converter connected from the primary energy storage and to the secondary energy storage for receiving electrical energy from the primary energy storage and providing electrical energy to the secondary energy storage,

wherein the second voltage level is higher than the first voltage level; and

the electrical energy provided to the secondary energy storage is stored in the secondary energy storage to be provided to the second energy consumer for a period of time when required, whereby

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the second voltage level will not fall below the first voltage level during the period of time, thereby preventing a feedback from the secondary energy storage to the first energy storage.

38. (NEW) The power supply system according to claim 37, wherein the voltage converter (3) is a high-setting adjuster.

39. (NEW) The power supply system according to claim 37, wherein the voltage converter (12) is based on transformatory potential separation.

40. (NEW) The power supply system according to claim 37, wherein the secondary energy storage is a storage capacitor (4) of great voltage swing.

41. (NEW) The power supply system according to claim 40, wherein said secondary energy storage is designed as one of a double-layer or multi-layer capacitor (4) of high capacity.

42. (NEW) The power supply system according to claim 37, wherein a current-limiting unit (13) is provided by which the first consumer is detected as a parameter of a total current load capacity of said primary energy storage (1) and the current load of said primary energy storage (1) and depending thereon, a defined current flow from charging said secondary energy storage (4) is determined and released.

43. (NEW) The power supply system according to claim 37, wherein the switching has a monitoring device (14) for detecting the voltage of said primary energy storage (1) which interacts with a current-limiting unit (16) for limiting the current made available by said secondary energy storage (4) to said second consumer.

44. (NEW) The power supply system according to claim 37, wherein the first consumer is a reduced-power consumer (2) and the second consumer is a high-powered consumer (5) relative to the power consumption of the first consumer.

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